

ABSTRACT OF THE DISCLOSURE

5 A robot arm mechanism includes a handling member for supporting and
handling an object, a robot arm made up of at least four arm links, and a robot arm
driving mechanism for driving the robot arm to assume its contracted and extended
position. The robot arm comprises first and second arm links and a link retaining
mechanism pivotably retaining the first and second arm links. The link retaining
mechanism comprises first and second joint cross linkages similar in shape and each
10 having two arms crossed to each other. The first joint cross linkage is integrally
connected with one of the first and second arm links of the robot arm. The second
joint cross linkage is integrally connected with the other one of the first and second
arm links of the robot arm. This leads to the advantage of providing a robot arm
mechanism exempt from driven gears, belts and pulleys forming part of a
15 synchronous motion mechanism necessitated by conventional robot arm mechanisms
to ensure that no dust is produced and fallen in a vacuum working chamber of highly
pure air.

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